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We dedicate this guide to all of the people and their families in South Carolina who struggle with diabetes.

The development of this guide was a collaborative effort of the South Carolina Department of Health and Environmental Control and the Medical University of South Carolina, College of Nursing, College of Medicine.



Ida Spruill, RN, MSW, MSN MUSC Project SUGAR Director REACH 2010 Project Director

Cheryl Stepka-Tracey, RN, MA, CDE REACH 2010, Community Outreach Coordinator Diabetes Initiative of South Carolina

Yaw Boateng, MS, MPH, RD
Health Communications/Coalition Manager
South Carolina Diabetes Control Program
South Carolina Department Health Environmental Control

Introduction

Sugar diabetes

Diabetes is a serious disease that affects how my body uses food. My body changes the food I eat into sugar. My blood carries sugar to the cells of my body. A hormone called insulin helps move the sugar from blood into my cells where it can be used for energy.

If sugar builds up in the blood instead of going into my body's cells then I have high blood sugar or sugar diabetes. Over time high levels of sugar or sugar diabetes can hurt my body and cause problems to my eyes, heart, blood vessels, and nerves. If I have diabetes it is important to know how to take care of myself to protect my body.

Diabetes can hurt my body. I will protect my body and help my diabetes by eating healthy, losing weight (if overweight) and by daily physical activity. When I have diabetes, the insulin in my body can't move sugar into my body's cells and muscles for energy. The sugar stays in my blood.

When this happens I have high blood sugar or sugar diabetes.

The amount of sugar in my blood is called my "blood sugar numbers" or "blood sugar levels." I must have the right blood sugar levels to stay healthy.

If I have high blood sugar, I have sugar diabetes. I will ask my health care provider how I can control my blood sugar and other problems caused by diabetes.

How will I feel if I have sugar diabetes?

If I have sugar diabetes and my blood sugar numbers are high, I might:

- Go to the bathroom often
- Get very thirsty
- Get very hungry
- Have blurry vision
- Lose a lot of weight
- Have sores that heal slowly and have more infections than usual
- Feel very tired
- Have dry skin
- Feel just fine



If a member of my family has one or some of these signs, I will have them see a health care provider. A simple blood test can tell if someone has sugar diabetes.

Why do so many people have sugar diabetes?

Years ago, people were more active. In many cases we grew our own food and ate healthier. Today, many people eat too much food that has too many calories from fat. Many people do not get enough physical activity. Many more people are overweight and have diabetes.

So I am more likely to get diabetes if:

- Someone in my family has diabetes
- I am African-American, American Indian, Hispanic/Latino or Asian Pacific Islander
- I am overweight
- I do not exercise
- I gave birth to a baby weighing over 9 pounds.

Choosing healthy foods, being active and keeping my weight down lowers my risk of having sugar diabetes.

Taking care of my diabetes

Are there different types of diabetes? YES!

Type 1 diabetes is when my body can't make any insulin at all. Type 2 diabetes is when my body makes SOME insulin but not enough, or the insulin it makes doesn't work well. Insulin cannot work well if I am overweight and do not exercise.

What do blood sugar numbers mean?

We all have sugar in our blood. The amount of sugar in my blood is called my "blood sugar numbers" or "blood sugar levels."

For most people healthy blood sugar levels are:

before meals 80 to 110 bedtime 100 to 140

I will plan with my health care provider what blood sugar numbers or blood sugar levels are right for me.

If I have diabetes, what can I do to help myself?

I should balance my meal plan, exercise and my medication to keep my blood sugar numbers at healthy levels.

Meal plan

I should:

- Eat fewer fried foods
- Not add fats at the table: butter, margarine, sour cream, gravy, salad dressing
- Eat less red meat; instead, eat fish, chicken or turkey
- Eat a variety of vegetables, fruits, breads, and whole grain breads and cereals
- Eat at least 3 meals a day at the same time each day
- Eat less salty foods
- Eat small servings and avoid second helpings
- Drink sugar-free drinks and add only sugar substitutes
- If I take insulin shots I should eat at least three meals a day at about the same time each day

The meal plan and foods that are healthy for me are also healthy for the entire family.

Physical activity

Physical activity helps me lower my blood sugar levels. Exercise also can:

- Lower my blood pressure
- Help me lose weight
- Give me more energy
- Help my heart and lungs work better

What kind of physical activity is good for people with diabetes?

Many of my daily physical activities can be a form of exercise. I can make exercise a part of my life everyday by doing any of the following:

- Walking
- Gardening
- Cleaning the house
- Dancing
- Washing the car

Exercising my body every day will make a difference.

Remember:

On hot days, I will drink lots of water. And I will walk early in the morning or after the sun goes down.

Diabetes medication

Taking my diabetes medication is important. I will not change or stop my medication without checking with my health care provider first.

People with type 1 diabetes must take insulin (the needle).

People with type 2 diabetes may need to:

- Take pills
- Take insulin or the needle
- Sometimes take both pills and the needle



If I have to take medication for my diabetes, I will ask my health care provider when and how to take it.

Insulin

Why are insulin shots needed?

Our bodies need insulin to live. When our bodies do not make insulin or make enough of it, we need to take insulin (the needle) every day.

How to care for insulin

- I will keep extra unopened insulin in the refrigerator.
- Cold insulin stings! I will take my bottle of insulin out of the refrigerator at least 15 minutes before my shot.
- I will never put my insulin in the freezer.
- I will not leave insulin in a hot place (sunny window, in the car on hot days).

When should I take my insulin shot?

• I will check with my health care provider for when is the best time to take my insulin (the needle.)

Where should I give my insulin shot?

• The best place to give an insulin shot is in my stomach area.



I will NOT:

- Skip my insulin shots.
- Use insulin if it is clumpy or has crystals in it.

How to safely take my diabetes pills

Diabetes pills can help people with type 2 diabetes lower their blood sugar. Diabetes pills are not insulin. My health care provider may prescribe one or more pills to lower my blood sugar levels. To safely take my diabetes pills I will:

- Ask my health care providers when is the best time to take my diabetes pills
- Ask how often should I take my pills, or how many times a day I should take my pills
- Ask if my pills have any side effects and what to do if I have any side effects
- Keep pills and all medicine OUT OF REACH OF CHILDREN
- *Not* take extra diabetes pills if I forgot to take it earlier
- *Not* take fewer pills than is prescribed
- *Not* skip or miss taking pills
- *Not* skip meals because it can make my blood sugar fall too low



I will tell my health care provider about any other medication I am taking or if I am having problems getting or taking my daibetes medicines.

The highs and lows of sugar

High blood sugar

When my blood sugar stays too high I have high blood sugar. This can happen when:

- I am sick
- I eat too much food
- I take too little insulin or diabetes pills
- I feel stressed
- I am less active than usual

How do I feel when I have high blood sugar?

Sometimes I may feel good when my blood sugar is too high or I may:

- Be hungry
- Be thirsty
- Need to use the bathroom a lot to "pass water or urinate"
- Have a headache
- Have blurry vision
- Feel very sleepy

Over time high blood sugar levels will damage my body even though I feel good.

What should I do if I think I have high blood sugar?

- Check my blood sugar with a blood glucose meter
- Check my temperature for a fever
- Call my health care provider if I have missed my diabetes medication

If my blood sugar number is over 180 for 3 days in a row:

- I should call my health care provider
- I might be told to take extra medication
- I can also take a walk or some other exercise
- Check to see if I am following my meal plan
- Drink lots of water

If my blood sugar number is over 250 for 2 days and I take insulin:

• I must call my health care provider

Low blood sugar

When my blood sugar is under 70, I have low blood sugar. This happens if:

- I take too much insulin
- I take too many diabetes pills
- I exercise more than usual but don't eat enough food
- I don't eat enough food or eat my meals too late
- I skip meals
- I drink too much alcohol



How do I feel when I have low blood sugar?

- Sweaty
- Shaky or nervous
- Crabby
- Hungry
- Sleepy or confused
- Tired



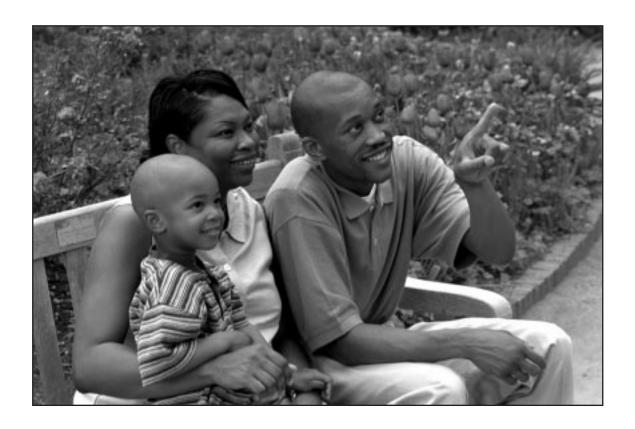
If I am not sure if my sugar is low but I have some of these symptoms, I will check my blood sugar with a blood glucose meter and then treat it.

If I don't take pills or the needle, I don't usually have low blood sugar.

What should I do when I feel I have low blood sugar?

- I should immediately check my blood sugar number with a blood sugar meter.
- If my blood sugar is below 70, I will eat or drink about 15 grams of carbohydrate (such as a half cup of fruit juice or 3 to 5 pieces of hard candy or 3 graham crackers).
- I should wait 15 minutes after I have eaten and check my blood sugar level again. If my blood sugar is still below 70, I should drink another half cup of fruit juice.
- If after another 15 minutes my blood sugar level is still below 70, I will call my health care provider.

- I should eat a small snack like crackers and fruit if my next meal is more than 30 minutes away.
- I will not drive if my blood sugar is below 70.
- I will not wait to treat low blood sugar because it can drop lower very fast!



I will teach someone in the house how to check and treat low blood sugar. I will learn how to know my signs of low blood sugar.

Diabetes and my body

If my blood sugar stays high for a long period of time, it can cause damage to my body.

Parts of my body that can be damaged by diabetes are:

- Blood Vessels
- Heart
- Nerves
- Kidneys
- Feet
- Eyes
- Teeth



Blood Vessels

How diabetes affects my blood vessels.

Keeping my blood sugar and blood fats at a healthy level will help protect my blood vessels and prevent serious health problems.

It is very important to keep my blood pressure at a healthy level to protect my blood vessels. A healthy blood pressure level for people with diabetes is 130/80 or below.

To keep my blood pressure under control I will:

- Get my blood pressure checked often
- Always take my blood pressure medication
- Stop smoking
- Cut down the amount of salt in my diet
- Eat healthy foods including fruits, vegetables and whole grain breads and cereals
- Exercise daily
- Have less stress in my life

To keep my blood fats under control I will:

- Avoid fat meats (bacon, ham hocks, sausage)
- Avoid foods fried in fat, lard or butter
- Trim all visible fat off meat
- Avoid sweet desserts, cookies and cakes

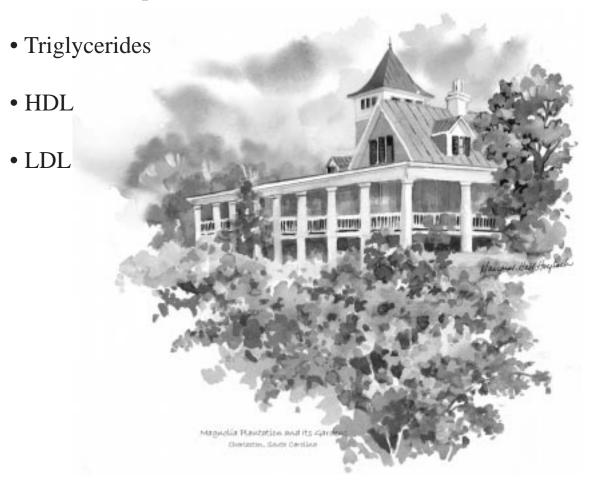
Heart

I will protect my heart by keeping my blood sugar, blood fats and blood pressure under control. I will call my health care provider if I have:

- Shortness of breath
- Swollen ankles

In addition, I will have the following tests every year to see how much fat is in my blood:

• Cholesterol profile



Nerves

The nerves in my body can be damaged by diabetes.

I will tell my health care provider if my hands or feet have any of the following:

- Pain
- Burning
- Tingling
- Numbness

I will tell my health care provider if I have any:

- Problems with sex
- Problems with diarrhea
- Problems with constipation
- Problems with nausea

I will do the following to help protect the nerves in my body:

- Keep blood sugar levels close to normal or to levels decided with my health care provider
- Keep blood pressure close to normal or to the range decided with my health care provider
- Stop smoking
- Stop chewing tobacco
- Drink less alcohol (never more than one or two drinks a day)
- See my health care provider at least once a year

Kidneys

Sugar diabetes can damage my kidneys, and I can get diabetic kidney disease. High blood pressure can make kidney disease worse. I need to keep my kidneys healthy!

To keep my kidneys healthy, I will:

- Keep my blood pressure and blood sugar under control
- Have my urine checked at least once a year to test for small amounts of protein
- Follow a healthy meal plan
- Stop smoking

I do not feel symptoms of diabetic kidney disease. I must ask my doctor to check for early signs of kidney disease.

Feet

Diabetes can cause damage to my feet. To keep my feet in good shape I must:

- Keep my blood sugar under control
- Not smoke
- Check my feet daily for cuts and bruises and call my health care provider if I notice any problems
- Wash my feet every day in warm water and pat dry
- Never put oil or lotion between my toes
- Wear socks and comfortable shoes like sneakers
- NEVER go barefoot, not even in the house
- Shake out my shoes before putting them on
- Call my health care provider right away if a cut, sore, blister or bruise on your foot does not begin to heal after one day

I will always take off my shoes and socks when I see my diabetes health care provider so my feet can be checked.

Eyes

Sugar diabetes can affect my eyesight and may even make me lose my sight.

I will call my health care provider right away if I:

- Have pain or pressure in one or both of my eyes
- Have blurry vision
- See rings around lights
- See dark spots or flashing lights
- Have trouble seeing things out of the corners of my eyes

Sometimes high blood sugar can cause eye disease. I will keep my eyes healthy by:

- Having a dilated eye exam by an eye doctor every year
- Keeping my blood sugar and blood pressure under control
- Not smoking

Teeth

People with sugar diabetes are more likely to have problems with their teeth and gums.

To help my teeth and gums stay healthy:

- I will brush and floss my teeth every day
- I will visit my dentist twice a year
- I will tell my dentist I have sugar diabetes



Immunizations

Diabetes makes it harder for my body to fight some illnesses. I can help protect my body from some illness by getting two important immunizations (shots).

<u>Flu</u>

Flu is a serious illness that can be prevented by getting a flu shot every year.

• I will get a flu shot every year between October and November.

Pneumonia

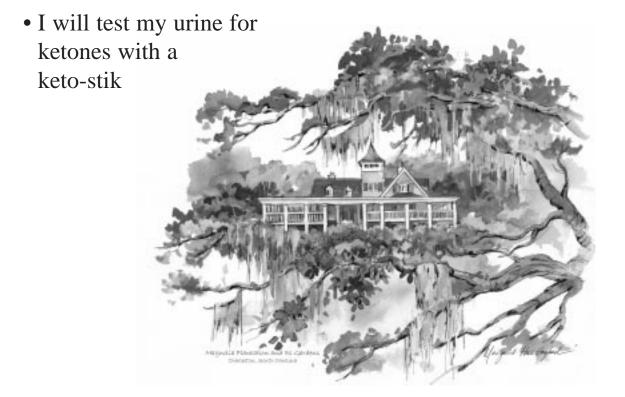
A serious disease that causes severe infections of the lung, the blood and the brain is called pneumonia. Getting the pneumonia vaccine can prevent pneumonia.

• I will ask my health care provider about gettting a pneumonia vaccine or shot and how long it will protect me from pneumonia.

Special Days

When I feel sick or have the flu, my blood sugar may be higher. When I am sick:

- I will continue to take my insulin or my diabetes pills
- I will check my blood sugar every 4 hours
- I will try toast, a little juice, or soup if I cannot eat regular meals or keep food in my stomach
- I will drink lots of liquids if I cannot eat regular meals



I will call my health care provider right away if:

- I can't keep food or liquids down (I throw up)
- I have diarrhea or runny stools
- I have a fever or my breath smells fruity
- My blood sugar is 250 or higher
- I have trouble breathing



When Traveling

Traveling can be fun and exciting but often changes a person's regular eating and activity patterns. While I am traveling I will:

- Wear an ID bracelet that says I have sugar diabetes
- Carry hard candy, such as 5-6 Lifesaver candies, for low sugar spells
- Take extra diabetes supplies, insulin, medication and diabetes pills with me
- Take the name and phone number of my health care provider with me
- Be sure to eat regular meals and get my exercise
- Be sure to check my blood sugar
- Take my diabetes medicine as prescribed by my health care provider

Rights and Responsibilities

I have the right at my first diabetes

visit to:

- A medical history
- A physical examination
- Laboratory tests for diabetes
- A sugar diabetes management plan
- Have my questions answered in a way that I can understand

I have a right to the following exams:

- Blood pressure and pulse
- Heart
- Skin
- Teeth/gums
- Eyes
- Thyroid
- Feet
- Nerves

I have a right to the following tests:

- Hemoglobin A1c (Blood Test)
- Kidney function (urine or blood test)
- EKG (heart)
- Blood tests for cholesterol and other fats

I have a right to know my test results, what they mean and what to do to improve my health and diabetes

If I have sugar diabetes my responsibilities are:

- Eat healthy foods at regular times
- Get exercise or physical activity on most days
- Check my feet daily
- Check my blood sugar levels
- Check my blood pressure
- See a health care provider on a regular basis
- Ask my health care provider about pneumonia and flu vaccines
- See a dentist at least twice a year.

I must love myself because my body is a temple.

Resources

If I need help with getting my diabetes medicine or finding a health provider, I can call:

| American Diabetes Association | 1-800-232-2383 |
|------------------------------------|----------------|
| Commun-I-Care | 1-800-763-0059 |
| Diabetes Initiative South Carolina | 1-843-876-0968 |
| Lilly Cares | 1-800-545-6962 |
| Medic Alert Foundation | 1-800-432-5378 |
| Project SUGAR | 1-843-792-5158 |
| REACH 2010/MUSC | 1-843-792-5872 |
| SC DHEC's Diabetes Control Program | 1-803-898-0757 |
| SC Diabetes Coalition | 1-803-898-0537 |

Contributors

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S.C. Diabetes Control Program

Diabetes Initiative of South Carolina

Enterprise/MUSC Neighborhood Health Program (HAD-ME)

Project SUGAR Nurses

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Georgetown County Diabetes CORE Group

Ellen Babb Dr. Deborah Carson

Dr. Rhonda Hill Dr. Deyi Zheng

Dr. James L. Coleman Elizabeth Todd-Heckel

Dr. Carolyn Jenkins William Robinson
Jane Parker Tammy McCottry

Denise Wood Barbara Wright-Mallory

Pamela Arnold Diane Kennedy Tammy Butler Barbara Carlson

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